



Warts and All

Lynda Steyn, BPharm
Amayeza Information Services

Patients will often present in the pharmacy seeking advice on how to treat warts. Warts (also known as verrucas) may appear on any part of the skin and mucous membranes. This article focuses on cutaneous warts, and not on warts affecting the anogenital area, for which a doctor must be consulted.

What are cutaneous warts?

Cutaneous warts are growths which most often occur on the skin of the hands and feet. Warts occurring on the hands or fingers are known as “common” warts, while warts appearing on the soles of the feet are known as “plantar” warts. “Flat” warts usually appear on areas of skin that are shaved on a regular basis.

Cutaneous warts may occur singly or in clusters. Some warts may have small, black, seed-like dots in them. These are tiny blood vessels that have formed a clot.

Warts (also known as verrucas) may appear on any part of the skin and mucous membranes

Warts are caused by a virus known as Human papillomavirus (HPV). There are many different HPV subtypes that cause cutaneous warts and these warts are non-carcinogenic (do not cause cancer).

A wart has a rough, firm texture due to the virus causing a build-up of keratin in the epidermis. Warts may differ in size, texture and shape.

Table I illustrates some of the different types of cutaneous warts.

Who is more likely to be affected by warts?

School-aged children and adolescents are most affected by cutaneous warts. They may also occur more commonly in people with certain chronic diseases, such as atopic

Table I. Different types of cutaneous warts

Type of wart	Description	Location
Common warts (verruca vulgaris)	<ul style="list-style-type: none"> Rough, irregular surface (cauliflower appearance). Size may range from 1 mm to larger than 1 cm. May be round or oval-shaped. 	Most commonly found on hands (knuckles and fingers) and knees .
Plantar warts	<ul style="list-style-type: none"> Begin as a white, shiny papule and progress to become flat, round, and sharply defined. May be more painful than common warts if they develop on the sole of the foot. Often presents with a blood vessel in the middle which looks like a “black dot”. 	Found commonly on the sole of the foot.
Plane (Flat) warts	<ul style="list-style-type: none"> Occur mainly in clusters. Usually occur as smooth, flat, or slightly elevated papules. Yellowish in colour. 	May occur anywhere, but usually appear on face, hands and shins.
Filiform warts	<ul style="list-style-type: none"> Long, slender warts. 	Occur usually around lips, eyelids or nostrils.
Mosaic warts	<ul style="list-style-type: none"> Cluster together to form a patch resembling a “tile-like” pattern. 	Usually occur on the palms and the soles.

dermatitis (eczema), or those who have a suppressed immune system.

How are warts treated or managed?

Most warts in children will disappear spontaneously without any treatment within two years, while warts in adults tend to take longer to resolve. Warts in people with weakened immune systems may not spontaneously resolve and may also not respond well to treatment. Warts may reappear after they have resolved spontaneously, or after treatment.

Warts generally do not have any symptoms. However, some warts, such as plantar warts, may be painful due to them mostly occurring on the soles of the feet. Other warts may be tender to the touch.

Although most warts are harmless, people may seek treatment advice if the warts are painful, in an area causing discomfort, or are embarrassed by their appearance. Various topical wart treatments are available without a prescription. Choice of product may depend on the type of wart, where it is located on the body, and patient preference. The least painful option should be recommended first, especially for children who are less tolerant to pain.

Salicylic acid

Salicylic acid is a keratolytic (peeling agent) that exfoliates (debrides) the affected skin.

This is generally considered first-line treatment and is available in a high concentration in various topical forms, such as medicated plasters, liquids or ointments.

Use of salicylic acid topically has the least side-effects and is also painless.

Common warts are more likely to respond to treatment with salicylic acid than plantar warts. It may also be found in combination with other ingredients, such as lactic acid or podophyllin.

- Administration
 - The wart should be soaked in warm water for 15 to 20 minutes to soften the skin.
 - Thereafter, an emery board (nail file) should be used to file down the wart. The part of the emery board used on the wart must be discarded immediately after use, as re-use on the skin may spread the wart virus.
 - It is important to protect the skin area surrounding the wart. A product, such as petroleum jelly (Vaseline®) may be used around the wart before applying the salicylic acid directly to the wart. Alternatively, a corn plaster may be used to protect the area around the wart.
 - The skin should be dry before applying the salicylic acid product.
 - Duct tape or any other occlusive tape may be used over the salicylic acid ointment, or plaster to secure the salicylic acid to the skin.
 - Products containing salicylic acid usually require daily use for a few days or weeks.

Other wart treatments, such as cryotherapy may be alternated with salicylic acid therapy to try and improve the results. However, it has been shown that using salicylic acid on its own may be just as effective as cryotherapy on its own.

Cryotherapy (freeze therapy)

Cryotherapy involves freezing the wart. This method of wart therapy is painful and not recommended for younger children. Products, such as liquid nitrogen, are applied by a doctor.

Products containing freezing agents, such as dimethyl ether propane (e.g. Wartner®) are available in a spray form for home use. This spray can reach a temperature well below freezing point. A blister typically forms around the wart after use and this usually disappears, along with the wart, after a few days. The same process (as for salicylic acid above) should be followed to prepare the wart before using the spray (i.e. soaking and filing of the wart).

Podophyllin

Products containing podophyllin combined with salicylic acid may be more useful for plantar warts.

These podophyllin-containing products are potent and the treated areas may become painful or irritated. As for any wart product, the manufacturer's application recommendations should be carefully followed, and the surrounding normal skin should be protected.

How effective are over-the-counter treatments for warts?

Warts usually require persistent, prolonged treatment and may not always respond to initial therapy. Warts may also spread or recur after they have resolved.

How do warts spread?

Warts are contagious, and the virus is mainly spread through direct skin-to-skin contact. However, the virus may also be spread indirectly from contaminated areas, such as swimming pool surrounds, locker room floors, sharing towels and communal showers. The virus can spread to different parts of the body on a person who has warts, through shaving, nail-biting, scratching the wart etc.

Wet skin, or skin that is damaged is more likely to become infected with the HPV virus. Once infected, the warts may take from two to six months to appear.

How can warts be prevented?

People with warts should be made aware of the fact that warts are contagious and measures should be adopted to prevent their spread (on themselves, as well as to other people).

These measures include:

- Wearing flip-flops or sandals around swimming pools or in public showers.
- Avoiding sharing towels.
- Avoiding scratching a wart, or biting nails on fingers that have warts on them.
- Avoiding shaving areas (such as face or legs) with warts

on them (electric razors may be used).

- Covering broken skin, especially on soles of feet.
- Avoiding sharing or reusing equipment such as nail files or pumice stones used on warts.
- Keeping foot warts dry, as moisture encourages their spread.
- Covering warts with plasters when swimming or using gym equipment (if wart is on the hand).

When to refer:

- Patients with warts on the face or on sensitive areas (such as the anogenital region) should be referred to a doctor.
- Patients with circulatory problems or with diabetes should not use over-the-counter products, such as salicylic acid. There is an increased risk of skin damage and peripheral nerve problems in these patients.
- Immunosuppressed patients are less likely to respond to wart treatment and more likely to have a recurrence of warts once removed and should therefore be referred.
- If unsure of wart diagnosis, refer the patient to the doctor for assessment.
- Any wart that is bleeding, spreading, changing in appearance, or causing significant pain should be referred.

Most warts (approximately 65%) will resolve spontaneously, without any therapy, within two years. The HPV virus, however, remains on the skin and is the reason for most wart recurrences and spreading. Patients need to be persistent with the therapy, as the wart is rarely removed after a single treatment application. The length of time it takes for the wart to disappear with treatment will differ from patient to patient. However, a wart that is not responding to persistent therapy should be referred to a doctor for evaluation.

Bibliography

1. Shenefelt PD. Nongenital warts. Medscape. [updated 5 Jun 2018; cited 29 Jan 2019]. Available from: <https://emedicine.medscape.com/article/1133317-overview>
2. Goldstein BG, Goldstein AO, Morris-Jones R. Cutaneous warts (common, plantar, and flat warts). In: UpToDate. [updated 7 Mar 2018; cited 29 Jan 2019].
3. Warts and verrucas. NHS inform. Homepage on the internet. [updated 1 May 2018; cited 29 Jan 2019]. Available from: <https://www.nhsinform.scot/illnesses-and-conditions/skin-hair-and-nails/warts-and-verrucas>
4. Bhargava HD. Understanding common warts - Treatment. WebMD. Homepage on the internet. [updated 5 Apr 2018; cited 29 Jan 2019]. Available from: <https://www.webmd.com/skin-problems-and-treatments/understanding-common-warts-treatment#1>
5. Monthly Index of Medical Specialities (MIMS) Guide to OTC Products. Vol 24 2018. Warts. p 243.
6. Rossiter D, ed. South African Medicines Formulary. 12th Edition. Warts and Corn Preparations. p 212-213.
7. Warts. Cleveland Clinic. Homepage on the Internet. [updated 4 Jun 2018; cited 29 Jan 2019]. Available from: <https://my.clevelandclinic.org/health/diseases/15045-warts?view=print>
8. Warts. American Academy of Dermatology® 2018. Homepage on the Internet. Available from: <https://www.aad.org/public/diseases/contagious-skin-diseases/warts#overview>